

## FAST RECOVERY EPITAXIAL DIODE

600V / 8A  
 $V_F=2.1V @ I_F=8A, t_{rr}=22ns$

### PRODUCT FEATURES

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

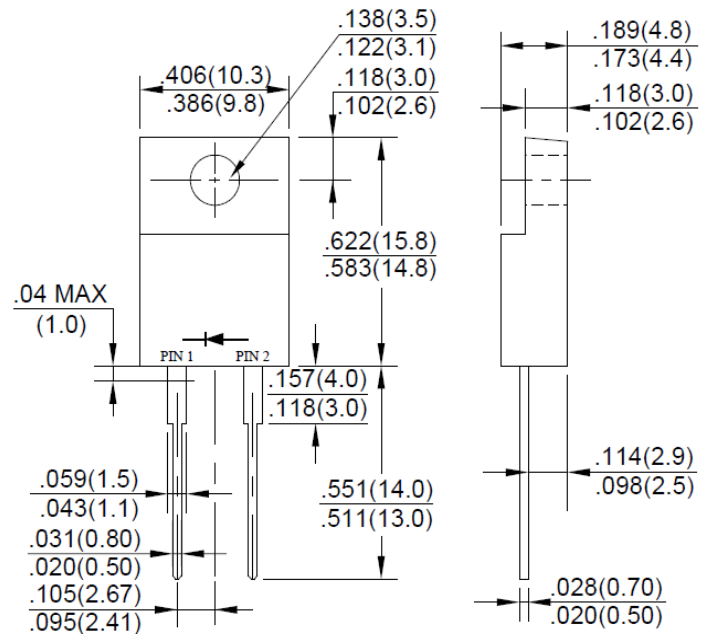
### APPLICATIONS

- Converter, PFC
- Freewheeling, Snubber
- UPS, Plating Power Supply
- Inversion Welder

### MECHANICAL DATA

- Case : ITO-220AC Molded Plastic
- Epoxy : UL94V-0 rate flame retardant
- Polarity : As Marked

### ITO-220AC



### ABSOLUTE MAXIMUM RATINGS (TC=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUES	UNIT
		D8A06FT	
Maximum Repetitive Reverse Voltage	$V_{RM}$	600	V
Average Forward Current	$I_{F(AV)}$	8	A
Non-Repetitive Surge Forward Current	$I_{FSM}$	110	A
Power Dissipation	$P_D$	36.7	W
Operating Junction and Storage Temperatures	$T_J, T_{STG}$	-55 to + 150	°C
Thermal Resistance	Junction-to-Case	$R_{\theta JC}$	3.4 °C/w
Module-to-Sink		1.1	Nt.m
Weight		2.3	g

### ELECTRICAL AND DYNAMIC RECOVERY CHARACTERISTICS (T<sub>J</sub>=25°C, unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Typ.	Max.	UNIT
Reverse Leakage Current	$V_R=600V$	$I_{RM}$	-	-	25	μA
	$V_R=600V, T_J=125°C$		-	-	250	μA
Forward Voltage	$I_F=8A$	$V_F$	-	1.7	2.1	V
	$I_F=8A, T_J=125°C$		-	-	1.9	V
Reverse Recovery Time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	$t_{rr}$	-	18	28	ns
Reverse Recovery Time	$V_R=300V, I_F=8A$	$t_{rr}$	-	22	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=25°C$	$I_{RRM}$	-	2.5	-	A
Reverse Recovery Time	$V_R=300V, I_F=8A$	$t_{rr}$	-	48	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=125°C$	$I_{RRM}$	-	5.5	-	A



FIG. 1 - Typical Forward Voltage Drop Characteristics

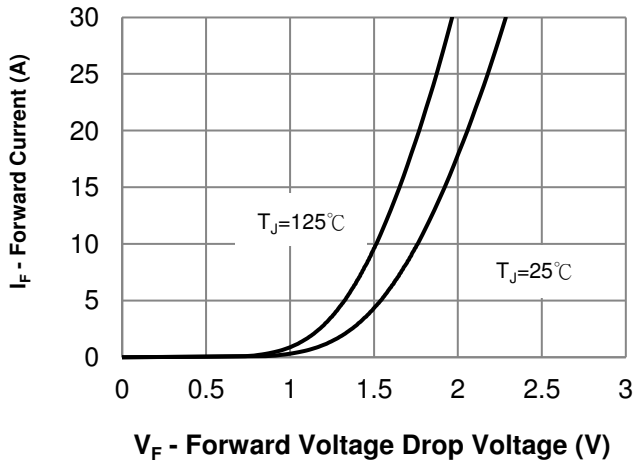


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

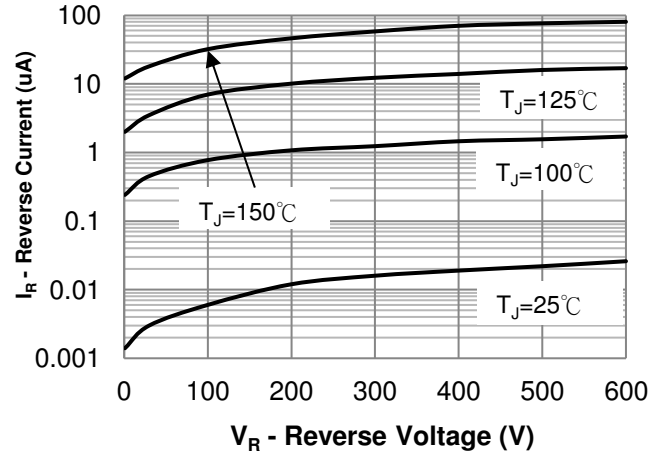


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

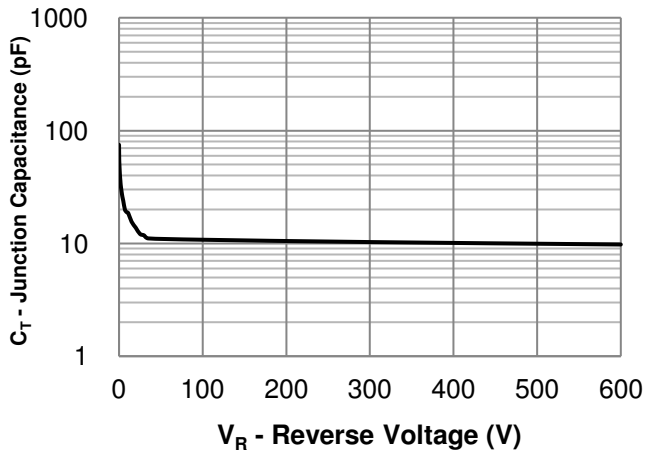


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature

